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Encourage Innovation in the
Use of New Telecommunications
Technologies
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ORIGINAL FILE

TO: The Commission

Redevelopment of Spectrum to

In the Matter of

REPLY COMMENTS OF CABLEVISION SYSTEMS CORPORATION

Cablevision Systems Corporation ("Cablevision"), by its attorneys, hereby submits its reply comments in response to the Notice of Proposed Rulemaking adopted by the Federal Communications Commission in the above-captioned rulemaking proceeding.¹

INTRODUCTION

The voluminous comments filed in this proceeding present in clear relief the great challenges facing the Commission in identifying and allocating spectrum for the use of emerging communications services. On the one hand, the tremendous interest generated by this proceeding is evidence of the compelling need to make available spectrum for a variety of emerging services with great potential, but which are as yet unproven in the marketplace. On the other hand, the comments also make a compelling case for due consideration of the needs of incumbent users of the 1.8 to 2.2 GHz band, whose services have substantial and demonstrable value, and form a critical portion of the nation's telecommunications infrastructure.

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Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, Notice of Proposed Rulemaking, 7 FCC Rcd. 1542 (1992) ("Notice").

Cablevision's interests in this proceeding parallel this fundamental dichotomy of conflicting policy goals. Cablevision has been very active in pursuing the development of one emerging communications service, the Personal Communication Service ("PCS"), pursuant to four experimental licenses granted to Cablevision and its affiliates by the Commission in February of 1991. Based upon its efforts to identify and validate the unique potential of a cable-based PCS network infrastructure, Cablevision has sought a Pioneer's Preference for this service. Cablevision and its affiliates also own and operate extensive fixed point-to-point and remote facilities, mainly in the CARS band. As such, Cablevision is very much aware of the great utility of over-the-air links as an essential element of robust, reliable telecommunications networks. It is also sympathetic to the concerns of the wide variety of companies, and, indeed, industries, which rely upon the 1.8 to 2.2 GHz band to provide critical communications services.

Starting from this perspective, and following consideration of the extensive comments submitted in this proceeding, Cablevision believes that the Commission should move forward and provide for access to the 1.8 to 2.2 GHz band for emerging communications services. Nonetheless, given the many uncertainties surrounding the development of these services, and the great potential for technological developments which may radically change the issues at stake, as well as the appropriate regulatory responses, the Commission should avoid rigid timetables and rules in managing access to this band. Rather, the Commission should adopt a more flexible approach which creates appropriate incentives for efficient use of spectrum, while avoiding unnecessary dislocation of existing users. Specifically, the Commission should adopt a flexible standard under which existing users will only be required to relocate, or convert to secondary status, when it is demonstrated that there is an actual need for the frequencies

occupied by incumbent users for an authorized emerging telecommunications service, and it is further demonstrated that there are no commercially reasonable technical means to permit cosharing on a co-primary basis of frequencies by incumbent users.

I. Incumbent Users of the 1.8 to 2.2 GHz Band Should Only Be Displaced If An Actual Need For Frequencies and A Lack of Technical Means For Co-Sharing Can Be Demonstrated

In the Notice in this proceeding, the Commission is appropriately sensitive to the risks associated with the premature displacement of existing, high value uses of the spectrum in favor of emerging, but as yet unproven, telecommunications services. The initial comments filed in this proceeding confirm that existing users form a critical portion of the nation's telecommunications infrastructure, and should not be lightly displaced. While few question the importance of the services provided by incumbent users in the 1.8 to 2.2 GHz band, there is far more controversy over the appropriate approach to permitting emerging service providers to utilize this band. In the Notice, the Commission proposed that incumbent users should be permitted co-primary use of the band for a defined transition period of ten to fifteen years. A substantial number of commentors argue that this time frame is too long; an equally substantial number of commentors propose a longer time frame, or permanent co-primary status.

The Commission's task in providing for a transition in the use of this band, and the possible relocation of incumbent users, is complicated by the many uncertainties surrounding this process. Establishment of a time frame for this transition requires predictions, or at least assumptions, as to the future state of technology. In particular, the availability of technology

See, e.g., Comments of the National Telecommunications and Information Administration at 4-5 (filed June 8, 1992) ("NTIA Comments").

to permit incumbent users to migrate to higher frequency bands without substantial losses in performance, as well as the availability of technology which might permit co-sharing of the band by incumbent users and emerging service providers on a non-interfering basis, would obviously influence the selection of an appropriate time frame for the relocation of existing users.

Another important source of uncertainty relates to the emerging services themselves. While the Commission in this proceeding seeks to adopt general procedures for access to the 1.8 to 2.2 GHz band for any number of emerging services, many of the comments, for better or worse, focus on one of the more immediate emerging services on the horizon, PCS. While Cablevision strongly believes in the potential of PCS, the very character of this service, from the nature of the service or services themselves, to the underlying technologies to be utilized in providing these services, are still very much a source of contention, and will necessarily be defined further based upon the extensive developmental efforts currently underway by parties such as Cablevision. The level of demand for specific PCS services, and the evolutionary path or paths for introduction of these services, are necessarily also uncertain.

In light of this irreducible uncertainty, Cablevision submits that confident predictions and expressions of certitude on the issues in this proceeding must be viewed with a healthy skepticism. More importantly, the Commission's policy choices in this area must take these fundamental uncertainties into account. Once this is done, Cablevision submits that the establishment of definite time frames for changes in the utilization of the 1.8 to 2.2 GHz band should be avoided. Rather, the Commission should define the conditions under which enforced changes in spectrum utilization, and the primary status of incumbent users, would be

appropriate, and establish procedures for making determinations as to whether these conditions have been satisfied for a particular emerging service.

Specifically, Cablevision submits that the Commission should, as a general matter, allocate the proposed portions of the 1.8 to 2.2 GHZ band for use by emerging services on a co-primary basis. Incumbent users, however, should be permitted to retain co-primary status for pre-existing uses of this spectrum until such time as it has been demonstrated: first, that there is a demonstrable need on the part of providers in an emerging service for the frequencies occupied by incumbent users; and second, it has been demonstrated that there is no commercially reasonable technical solution to permit co-sharing of the frequencies on a co-primary basis without mutual interference.

Cablevision believes that establishment of these conditions as a prerequisite to loss of coprimary status or relocation of incumbent users provides the most appropriate balance of the
need to create incentives for and facilitate introduction of emerging services, while protecting
incumbent users. The first condition, a demonstrable need for frequencies, accommodates the
reality, identified by many commentors in the context of PCS, that in many, if not all areas,
existing users may not place inordinate demands on available spectrum in the 1.8 to 2.2 GHz
band.^{3/} These comments are consistent with Cablevision's own studies of the New York and
Cleveland metropolitan area markets, where Cablevision has found a low density of active
microwave paths in that band. Establishment of this condition also takes into account the fact

See, e.g., Comments of American Personal Communications at 14-15 (filed June 8, 1992).

that emerging services may take time to evolve to the point where available frequencies are insufficient to meet the legitimate needs of a service.

The second proposed condition, demonstration of the lack of technical solutions for joint use of frequencies, is essential to maximize the incentives for development of technologies and techniques which may avoid the necessity for costly relocation of incumbent users altogether. Cablevision strongly believes that, in fact, technical solutions may be developed along these lines, not simply for PCS, but for coordination of emerging mobile services and fixed uses in general.

This is perhaps best evidenced by the tremendous attention and resources already being devoted to the development of techniques for co-sharing of frequencies by PCS and fixed users. Similarly, this intense interest parallels developmental efforts in any number of technical areas, such as digital compression, which could radically change, and improve, the efficiency of spectrum usage.

Cablevision submits that this more flexible approach would better serve the public interest than an arbitrary definition of transition time periods in the abstract. The extensive record in this proceeding contains little more than the best guesses of interested parties as to the state of technology, and markets for emerging services, at various points in the future. Cablevision submits that it would be far better public policy to manage any necessary transition in spectrum usage based upon a significant period of experience with joint use of the spectrum and with the development of specific emerging services.

See, e.g., NTIA Comments at 16 (arguing that time frames may not take into account the fact that demand for services may not materialize within a particular time frame).

While the prospective definition of fixed time frames should be avoided, it would be appropriate for the Commission to establish tentative time lines for making determinations as to whether the two conditions for relocation have been satisfied, for each particular emerging service. The most appropriate vehicle for the establishment of these time frames would be in rulemaking proceedings authorizing a particular service, so that any time lines could be the subject of focused comments taking into account the specific characteristics of a service and the effects on incumbent users, considering, for example, the likely depreciated value of equipment rendered obsolete by transitional procedures. At such time, the Commission could also specify whether its determination of whether the conditions for relocation of incumbent users have been satisfied would be made on a blanket basis, or a market by market basis, and define the procedures for making such determinations.

As one illustration, in the context of PCS, Cablevision believes that it may be appropriate to initiate further consideration of whether relocation of incumbent users may be required as early as five years after the service is initially authorized. In other cases, more time may be required for technologies and services to evolve before the Commission will have an adequate basis for making these determinations. In all cases, however, these determinations should be based on the unique needs and circumstances of a particular service, following a significant period of real world observation.

CONCLUSION

This proceeding presents the Commission with both great opportunities and great risks.

The Commission should take a positive first step toward encouraging the introduction of emerging services by providing access to the 1.8 to 2.2 GHz band for such services, including,

initially, PCS, on a co-primary basis. To avoid unnecessary dislocation to existing users, however, the Commission must take a flexible approach to relocation of users which takes into account actual needs and actual technological developments.

Respectfully submitted,

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